Golubkin, V. N.

USSR/Chemistry - Physical chemistry

Card 1/1 Pub. 22 - 21/45

Authors : Kornev, Yu. V., and Golubkin, V. N.

Title : Determination of vapor pressure and heat of sublimation of cobalt in a 1050-1250°C temperature range

Periodical : Dok. AN SSSR 99/4, 565-567, Dec 1, 1954

Abstract : The method employed in measuring the vapor pressure of metallic cobalt (99.3% Co, 0.2% Fe, 0.1% Cu, o.1% C), in the presence of a Co^{60} radioactive isotope, is described. This method working on the principle of a condensation target and radioactive indicator makes it possible to express the vapor pressure relative to the rate of vapor discharge from the nozzle by means of a certain equation. The vapor-pressure values for pure Co, obtained at 1050 - 1250°C temperature range, are shown in the table. Nine references: 5-USSR; 3-USA and 1-German (1932-1953). Table; graph.

Institution : Central Scientific Research Institute of Ferrous Metals, Institute of Metallurgy and Physics of Metals

Presented by: Academician G. V. Kudryumov, June 30, 1954

USSR/Thermodynamics - Thermochemistry. Equilibria. B-8
Physical-Chemical Analysis. Phase Transitions.

Abs Jour : Referat Zhur - Khimiya, No 6, 1957, 18456

Author : Yu.V. Kornev, V.N. Golubkin.
Title : Determination of Vapor Pressure of Solid Cobalt and Iron with Radioactive Isotopes.

Orig Pub : Probl. metalloved. i fiz. metallov, sb. 4, 1955, 432-448

Abstract : The vapor pressure P of solid Co and -Fe was measured by Knudsen's method with the application of a condensation target and radioactive isotopes. logP (atm) for Co = 7.585 - $20.815/T \times 10^3$ (1050 to 1250°), the sublimation heat of Co is 95.2 ± 0.8 kilocal/g-atom; for γ-Fe logP (atm) = 8.52 - $22.60/T \times 10^3$ (1191 to 1350°), the sublimation heat is 103.5 ± 0.6 kilocal/g-atom. Using the bibliographic data concerning the activation energy of autodiffusion (Gruzin P.L. Prlbl. metalloved. i fiziki metallov, sb. 3, Metallyrgizdat, 1952), the

Card 1/2 - 158 -

B-8

USSR/Thermodynamics - Thermochemistry. Equilibria.
Physical-Chemical Analysis. Phase Transitions.

Abs Jour : Referat Zhur - Khimiya, No 6, 1957, 18456

authors determined the ratio of the autodiffusion activation energy to the bond energy (evaporation heat) for Co equal to 0.65, which coincides with the value known for non-ferrous metalls with face-centered cubic lattice (Dekhtyar I.Ya., Zh. tekhn. fiziki, 1950, 20, 8, 1015), as well as for γ-Fe and austenite (RZhMet, 1956, 658).

- 159 -

Card 2/2

GOLUBKIN, V.N.

Moscow. Vysshaye tekhnicheskoye uchilishche imeni Baumana. Kafedra matematicheskikh mashin

Vychislitel'naya tekhnika (Computer Techniques) Moscow, Mashgiz, 1959. 153 p. (Series: Moscow. Vyssheye tekhnicheskoye uchilishche. Sbornik, No. 2) 2,500 copies printed.

Ed.: B.V. Anisimov, Candidate of Technical Sciences; Tech. Eds.: B.I. Model' and A.F. Uvarova; Managing Ed. for Literature on Machine Building and Instrument Construction: N.V. Pokrovskiy, Engineer.

PURPOSE: This book may be useful to Aspirants and other students specializing in computer technology, and also to designers and engineering and technical personnel who make use of electronic computers.

School imeni Bauman) in honor of the 40th anniversary of the October Revolution. The articles contain the results of theoretical and experimental studies on the performance of various components of electronic computers. Among the topics discussed are program storage, control devices, the connection between the parameters of an algorithm and a machine, etc. The application of these components to the control of technological processes is also discussed.

ANISIMOV, B.V., kand.tekhn.nauk; GOLUBKIN, V.N., kand.tekhn.nauk;
DOVZHENKO, Yu.M.

Device for converting the form of program recording. [Trudy]
MVTU no.2:56-63 '59. (MIRA 13:5)
(Electronic calculating machines)
(Programming (Electronic computers))

ANISIMOV, B.V., kand.tekhn.nauk; GOLUBKIN, V.N., kand.tekhn.nauk;
SAVEL'YEV, A.Ya., inzh.

Magnetic tape recording control devices. [Trudy] MVTU no.2:
75-80 '59. (MIRA 13:5)
(Magnetic recorders and recording)

S/588/61/000/004/008/011
D234/D303

AUTHORS: Golubkin, V.N., and Belov, B.I., Candidates of Technical Sciences

TITLE: Programmed control of metal cutting machines

SOURCE: Avtomaticheskoye upravleniye i vychislitel'naya tekhnika, no. 4, Moscow 1961, 306 - 323

TEXT: The purpose of the paper is to classify the experience accumulated during the design of systems of programmed control, in order to have a unified point of view when considering a new system which is to be designed. All known systems are divided into 1) continuous, 2) discrete, and 3) discrete-continuous and a survey of system of the latter two types is given (chiefly those developed in non-Soviet-bloc countries). G.A. Spynu, Candidate of Technical Sciences of the Institute of Physics of AS, Ukrainian SSR, A.B. Yakhin, Professor and A.V. Chernyshev, Engineer, of MVTU im. Bauman are mentioned for their contributions in the field. There are 10 figures and 15 Soviet-bloc references.

Card 1/1

GOLUBKINA, I.; FEDOROVA, N.; MYAGKOV, M., redaktor; MALEK, Z., tekhnicheskiy redaktor

[Lake Seliger; itineraries for tours and excursions] Ozero Seliger; marshruty turistskikh puteshestvii i ekskursii. [Moskva] Izd-vo VTsSPS Profizdat, 1951. 61 p. (MLRA 9:10)
(Seliger, Lake)

GOLUBKINA, Z.S.

Brass plating of leather goods fittings. Kozh.-obuv.prom. 3 no.8:32-35 Ag '61. (MIRA 14:10)

1. Zaveduyushchiy laboratoriyey Moskovskoy fabriki kozhanykh izdeliy.

(Leather goods) (Brass plating)

GOLUBKINA, L.S.

Substituting synthetic materials for foodstuffs in the leather accessories industry. Kozh. prom. 6 no.9[illegible] '64.
(MIRA 17:12)

GOLUBKIVA, V.P.; KORONKEVICH, V.P.

Interference methods for determining deviations from plane-parallelity of large gauge blocks. Izm. tekh. no.9:9-12 S '64. (MIRA 18:3)

FREYDLIN, G.N.; GOLUBKO, L.A.

Synthesis of butynediol from acetylene and paraformaldehyde in organic solvents. Zhur.prikl.khim. 37 no.1:176-181 Ja '64. (MIRA 17:2)

GOLUBKOV, A.

[Mechanical drawing in the service of inventors and innovators] Grafiku - na sluzhbu izobretateliam i ratsionalizatoram. Barnaul, Altaiskoe knizhnoe izd-vo, 1960. 81 p. (MIRA 17:4)

Golubkov, A.A.

GOLUBKOV, A.A.

Using a biological microscope for metallography. Politekh. obuch. no.1:88-89 Ja '58. (MIRA 10:12)
(Metallography) (Microscope)

GOLUBKOV, A.G.

USSR/ Engineering - Wood bushings

Card 1/1 : Pub. 128 - 22/31

Authors : Golubkov, A. G.

Title : The use of wood-laminated plastics for hardwood bushings

Periodical : Vest. mash. 10, 88 - 92, Oct 54

Abstract : A report is presented concerning the application of certain varieties of hardwood for machine bushings. A description of the methods of application and production of bushings is given, together with technical data specifying the characteristics and types of wood used. Four USSR references (1941 - 1949). Illustrations; diagrams; drawings; tables.

Institution : ....

Submitted : ....

41427

S/142/62/005/004/005/010
E192/E382

9,2590

AUTHOR: Golubkov, A.G.

TITLE: Variable electromagnetic delay lines with capacitive pick-up

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy, Radiotekhnika, v. 5, no. 4, 1962, 492 - 497

TEXT: The usual delay lines suffer from the disadvantage that their maximum delays are of the order of fractions of a μsec. A new type of delay line, free of this deficiency, was therefore developed. One of these lines is illustrated in the diagram of Fig. 1. It consists of a number of LC elements and is provided with a capacitive pick-up which has a distributed capacitance C_{CB} with respect to the inductances of the individual elements of the line. The line is terminated by its image impedance Z_o, while the load impedance of the pick-up $Z_H \gg Z_o$. The transfer function of the line can be approximately expressed by:

Card 1/3

... is the number of ... is the output signal of ... with a sliding capacitive pick-up and

Variable electromagnetic ....

capacitive plates, connected to all the condensers of the line, was also tried. Again, the linearity of this line was quite satisfactory and this system had the additional advantage that it could employ a ready-made line. The delays obtained with such lines are much longer than those produced by the standard lines and they have the additional advantage of the absence of a sliding contact. There are 6 figures and 1 table.

ASSOCIATION: Kafedra RRU Kazanskogo aviatsionnogo instituta
(Department of RRU of Kazan' Aviation Institute)

SUBMITTED: March 27, 1961 (initially)
August 14, 1961 (after revision)

Fig. 1:

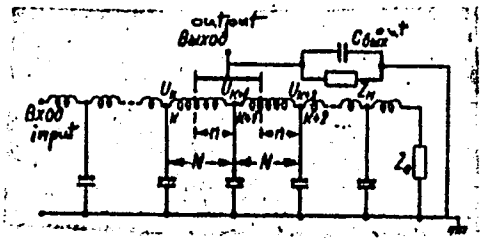
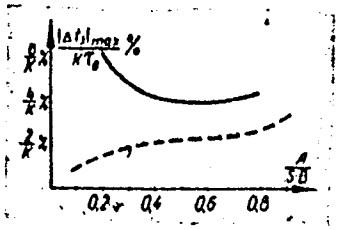


Fig. 3:



Card 3/3

ACCESSION NR: AP4042846 S/0142/64/007/003/0302/0309

AUTHOR: Golubkov, A. G.

TITLE: Choice of impulse shape for a transmitter

SOURCE: IVUZ. Radiotekhnika, v. 7, no. 3, 1964, 302-309

TOPIC TAGS: video signal, video signal shape, transmitter, video transmitter, video transmitter signal

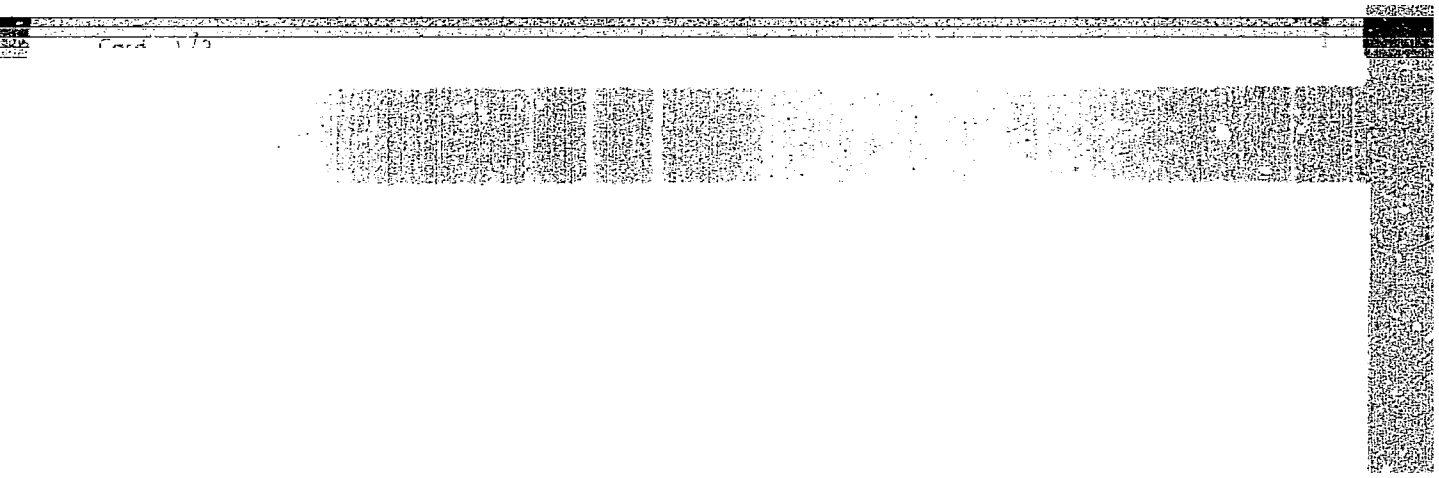
ABSTRACT: These two problems are theoretically considered: (1) Permissible deviation of the (video or radio) impulse shape from the optimum shape evaluated in a system of functional tolerances; (2) Effect of the above deviations on the adjacent-channel selectivity. Bell-shaped equal-energy impulses are regarded as optimum. A class of functions that meets these conditions is analyzed: (a) contains one variable and a parameter; (b) contains only equal-energy impulses; (c) is dense everywhere in the Gilbertian space; (d) contains practical

Card 1/2

GOLUBKOV, A.G.

Errors of two oscillographic methods. Izv.vys.ucheb.zav.; radiotekh. 7 no.5:577-588 S-O '64.

(MIRA 18:4)



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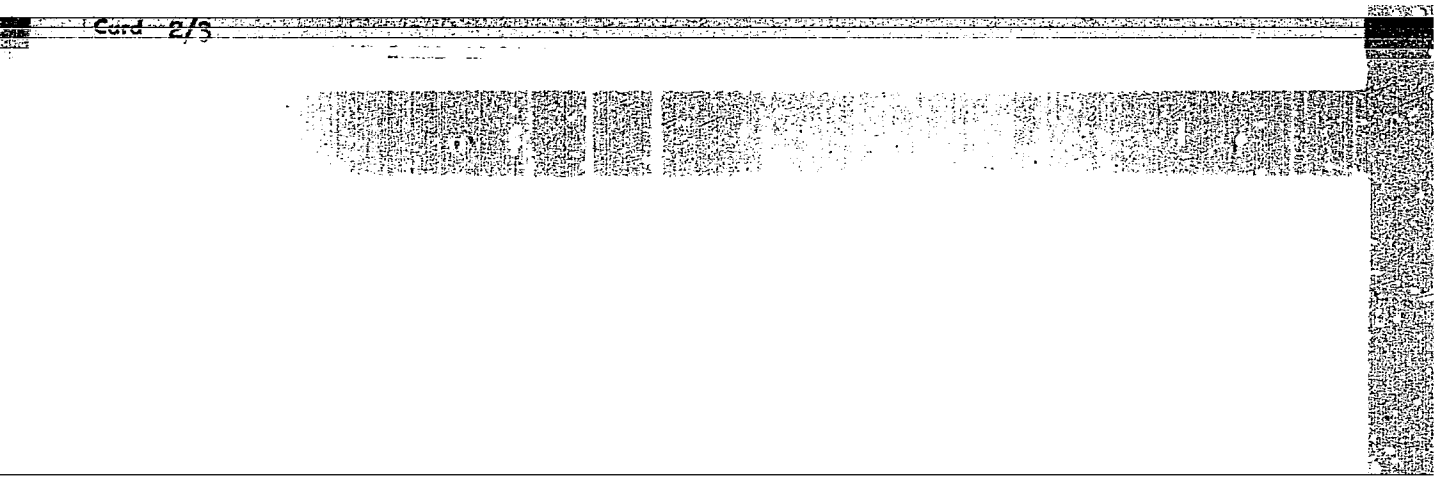
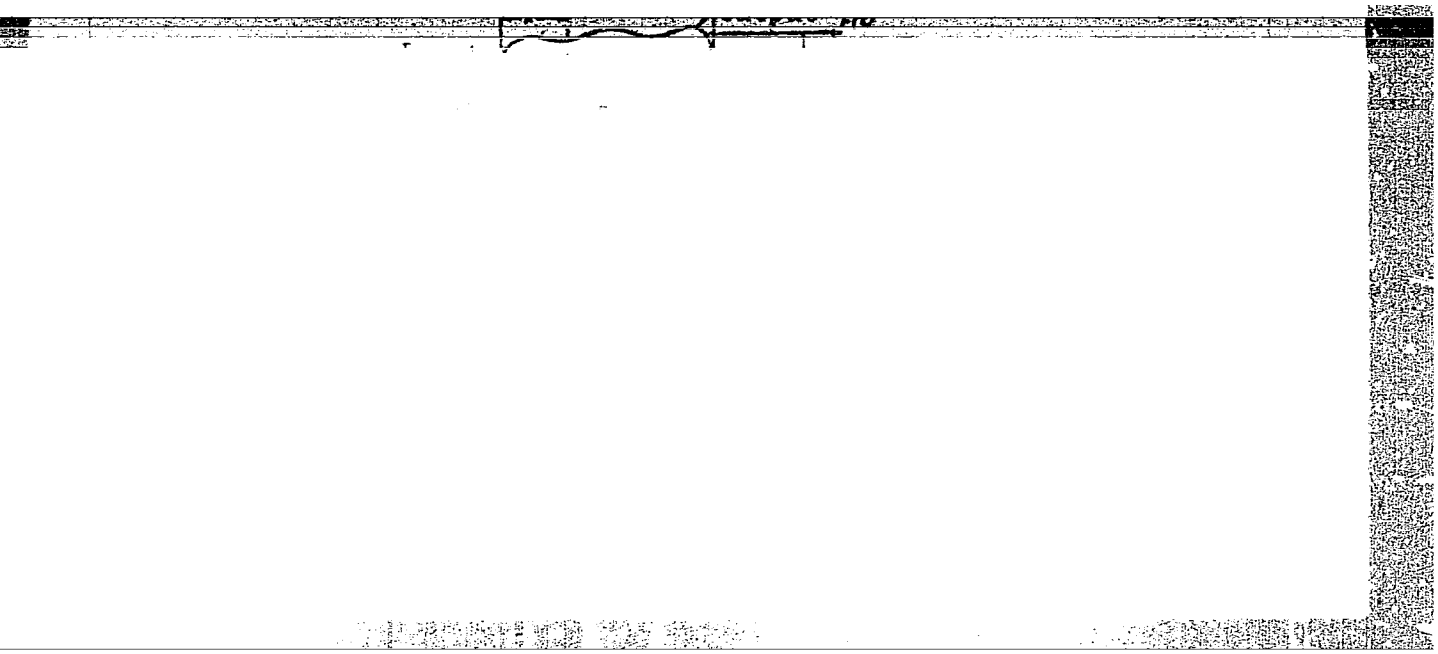




APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000515920003-6"

L 29595-66 EWT(1)

ACC NR: AR6012302 SOURCE CODE: UR/0274/65/000/010/A011/A012

AUTHOR: Golubkov, A. G.

24
B

TITLE: Synthesizing a delay-and-collecting system

SOURCE: Ref. zh. Radiotekhnika i elektrosvyaz', Abs. 10A79

REF SOURCE: Tr. Kazansk. aviats. in-ta, vyp. 85, 1964, 135-138

TOP TAGS: delay circuit, delay system

ABSTRACT: A particular case is considered of a delay-and-collecting system when the delay part is homogeneous and matched to the load and when the output voltage starts at zero time, i. e., $U(t)\begin{cases}=0 & \text{at } t<0\\ \neq 0 & \text{somewhere at } t>0\end{cases}$. The synthesizing of the delay-and-collecting system is reduced to a determination of a function $y(S)$ which connects the system parts at a point corresponding to delay S, i. e., to the solution of a first-kind Volterra integral equation. In solving this equation, the input voltage is represented as a sum of constant coefficients k_i and τ:

$$U(t)=\sum_{i=0}^{n-1} k_i R(t-i\tau).$$

One figure. Bibliography of 1 title. L. S. [Translation of abstract]

Card 1/1 SUB CODE: 09 UDC: 621.372.061.1

L 42164-66 EWP(c)/EWP(k)/EWT(d)/EWT(l)/EWT(m)/T/EWP(l)/EWP(v) IJP(c) JD

ACC NR: AR6013874 SOURCE CODE: UR/0274/65/000/011/A061/A061

AUTHORS: Ostrova, S. O.; Golubkov, A. G.; Plyankov, B. L.

69

TITLE: An electrostatic potential meter 14

B

SOURCE: Ref. zh. Radiotekhnika i elektrosvyaz', Abs. 11A470

REF SOURCE: Tr. Kazansk. aviats. in-ta, vyp. 85, 1964, 151-153

TOPIC TAGS: electrostatics, electric measuring instrument, surface property

ABSTRACT: An instrument was developed which can be used in industrial and laboratory conditions for the detection and measurement of electrostatic potentials on surfaces. As a converter of the constant potential induced in the probe, a dynamic capacitor is used, the capacitance of which is varied with a frequency of 1030 hz with the aid of a special oscillator. The amplified alternating voltage is fed to a synchronous detector and from this detector to a pointer-type instrument. The limits of electrostatic potential measurements are: from 0 to 100 kv; the instrument input resistance equals 10 Tohms (10^{13} ohms). The measurement error is 5%. The measurement of the electrostatic potentials in the limits from 0 to 1 kv is conducted with direct contact of the probe, but from 1 to 100 kv it is conducted through detachable dielectric separators which eliminate the possibility of an electric discharge between the surface and the probe. V. S. [Translation of abstract]

SUB CODE: 09, 14

Card 1/1 UDC: 621.317.3

GOLUBKOV, A.I., inzhener

Water impervious ness of concrete in tunnel construction. Bet. i zhel.-bet. no.4:147-148 Jl '55. (MLRA 8:9)
(Tunneling) (Concrete)

SOV/32-25-2-39/78

18(3)

AUTHORS: Golubkov, A. I., Panov, V. M.

TITLE: On the Delay of the Flowing Capacity of Steel With Dynamic Stressing (O vremeni zaderzhki tekuchesti stali pri dinamicheskom nagruzhenii)

PERIODICAL: Zavodskaya Laboratoriya, 1959, Vol 25, Nr 2, p 209 (USSR)

ABSTRACT: Dynamic stressing of soft steel results in a raising of the flow limit (FL) in dependence on the rate of deformation. In the present case steel St.3 was investigated by dynamic stressing with different degrees of overloading, and the time was determined during which the metal is able to maintain the (FL) with regard to the static (FL), i.e. the delay of flowing capacity (vremya zaderzhki tekuchesti)(DFC). The tests were carried out at 20° with a pneumatic plant and samples of a diameter D= 6 mm and an effective length of 5 D. The energy consumed was measured by means of a setup dynamometer - amplifier - oscillograph. The deformation was determined by means of resistor cells glued to the samples, a bridge connection, and the oscillograph MPO-2 .

Card 1/2

On the Delay of the Flowing Capacity of Steel With Dynamic Stressing

SOV/32-25-2-39/78

The (DFC) was determined directly from the oscillogram (Fig) (Table), and it was found that, basically, the (DFC) depends, at stable temperatures, on the degree of overstressing, and hardly on the rate of deformation. In the present case values ranging from 0.002 to 0.20 seconds were found for the (DFC). There are 1 figure and 1 table.

Card 2/2

GOLUBKOV, Aleksandr Ivanovich; SURGANOV, B.S., red.

[Evaluation of the technical and economic efficiency of the introduction of technological innovations; a methodological guide] Otsenka tekhniko-ekonomicheskoi effektivnosti vnedreniia novoi tekhniki; metodicheskoe rukovodstvo. Moskva, Ekonomika, 1964. 142 p. (MIRA 18:3)

L 22656-66 EWT(m)/T DJ

ACC NR: AP6006343 SOURCE CODE: UR/0413/66/000/002/0065/0065

INVENTOR: Vereshchagin, M. A.; Golubkov, A. I.; Teper, I. L.

ORG: none

TITLE: Angular axial fan. Class 27, No. 178013

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 2, 1966, 65

TOPIC TAGS: fan, axial fan, ~~angular axial fan~~ shaft, antifriction bearing

ABSTRACT: The proposed fan has a cooled shaft and bearings to permit operation in high-temperature gaseous media. To reduce the heating of the bearings from the heat transmitted along the shaft, the latter is made in two parts which are connected by

Card 1/2 UDC: 621.63—714.71

L 22656-66
ACC NR: AP6006343

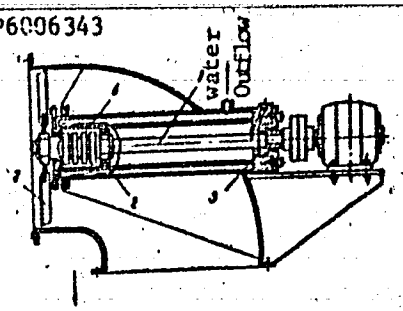
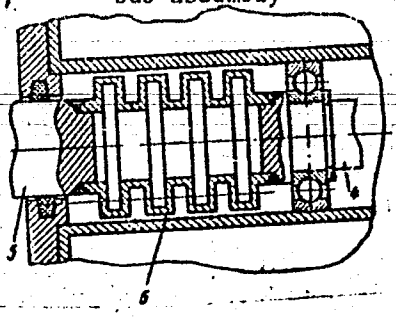


Fig. 1. Fan

1 - Shaft; 2 and 3 - shaft bushings; 4 and 5 - shaft sections; 6 - corrugated insert; 7 - impeller; 8 - jacket.

b. Sub-assembly



a corrugated insert containing a flowing lubricant. This insert is located between the fan impeller and in front of the cooling water jacket (see Fig.1). Orig. art. has: 1 figure. [TN]

SUB CODE: 13/ SUBM DATE: 15DEC64

Card 2/2

ACC NR: AP6034092 (A) SOURCE CODE: UR/0089/66/021/004/0262/0266

AUTHOR: Yampol'skiy, P. A.; Kokovikhin, V. F.; Golubkov, A. I.; Kondurushkin, N. A.; Bolyatko, A. V.

ORG: none

TITLE: Passage of neutrons through air

SOURCE: Atomnaya energiya, v. 21, no. 4, 1966, 262-266

TOPIC TAGS: neutron radiation, radiation hazard, air, neutron interaction, neutron energy distribution, radiation dosimetry

ABSTRACT: With an aim at reducing the radiation hazard to persons operating close to neutron sources, the authors present a Monte-Carlo calculation of the neutrons from monoenergetic point-like isotropic sources in an unbounded homogeneous medium of known density. The initial neutron energies considered are 0.001, 0.025, 0.2, 0.8, 2, 5, 10, and 14 Mev. The calculation was made with an M-20 electronic computer. From 7000 to 20 000 neutron histories were traced from the specified initial energy down to 0.2 ev. All possible neutron interactions with the nitrogen and oxygen atoms in air, contributing not less than 3% to the total neutron cross section, were taken into consideration, and other impurities in the air were disregarded. The space-energy and time distributions of the neutrons are obtained for distances 10 - 1300 m from the source and are presented in the form of numerous plots. Plots are also presented of the average time necessary for the neutrons to reach a given distance for different

Card 1/2 UDC: 539.125.52

ACC NR: AP6034092

initial neutron energies, and the flux of neutrons with energies larger than 0.2 Mev in air from point sources of various energies, and the neutron dose from a point source in air. The calculated neutron dose is compared with the experimental data obtained by the authors and by others, and agree within 25%. The authors thank O. I. Leypunskiy for useful discussions. Orig. art. has: 12 figures.

SUB CODE: 18/ SUBM DATE: 18May66/ ORIG REF: 005/ OTH REF: 004

Card 2/2

27434
S/187/60/000/012/003/005
D035/D113

9.4310

AUTHORS: Rodkevich, S.D.; Golubkov, A.P.; Zagreba, V.A.

TITLE: Aspects of using phototransistors

PERIODICAL: Tekhnika kino i televideniya, 1960, no. 12, 56-62

TEXT: The authors furnish the results of investigations of the basic parameters of phototransistors, made from П6 (P6) transistors. More than 50% of the phototransistors produced from a batch of transistors selected at randon had a photosensitivity of more than 1a/1m. The maximum sensitivity in some specimens ranged between 8 and 10 a/1m. The following parameters were investigated: (a) transistor current photosensitivity (φ_{it}); (b) resistance to alternating current in the dark (R_{it}); (c) permissible voltage at the collector (U_{ct}); (d) mean value of the dark current at the slanting section of the volt-ampere characteristic (I_{ct}). These parameters were graphically determined from the static and dynamic volt-ampere characteristics; the former were determined using a voltmeter and an ammeter,

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Aspects of using ...

whilst the latter were determined with a 50-Hz alternating current by means of a "characteriograph" which permitted the volt-ampere characteristics to be simultaneously read in the dark, and at any preset illumination of the phototransistor on the screen of an ЭНО-1 (ENO-1) oscillograph. The mean parameters that were found for phototransistors with a "floating" base showed that such phototransistors would be inefficient if used for recording small light fluxes with subsequent amplification. Therefore, the parameters had to be controlled either by a weak connection between the base and the emitter through a high resistance of 0.1 ÷ 1 M-ohm, or by using a positive fixed bias or self-bias in relation to the emitter in the base circuit. At an optimum bias of 0.5 V, fed through a resistance of 100 k-ohm, the phototransistor's basic parameters change as follows: I_{ct} decreases from 50 ("floating" base) to 5 μA ("bound" base); R_{it} increases from 10^5 to 10^7 ohms; U_{cd} increases from 6 to 12 V (d=diode); and φ_i decreases from 8 to 4 a/lm. The graphic calculation and the experiment showed that by changing the bias current in the base at F=2 x 10^{-5} lm, R_l=700 k-ohm (R_l= load resistance), and U_{co} = 21 V (U_{co} = optimum collector voltage),

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S/187/60/000/012/003/005
D035/D113

Aspects of using ...

the real value of the voltage photosensitivity (φ_u) can be increased from 8×10^4 to 6×10^5 V/lm, i.e. almost tenfold. The noise characteristics of phototransistors were investigated by means of a wide-band audio frequency measuring amplifier with a large input resistor and a square-law detector at the output. It was revealed that in both systems ("floating" and "bound" base) an increase in photosensitivity entails a tenfold increase in the signal-to-noise ratio, provided that the optimum operating conditions are chosen. At a signal-to-noise ratio equalling 10, the minimum flux that can be measured is 10^{-6} lm ("floating" base) and 10^{-7} lm ("bound" base). The frequency response of phototransistors was investigated with a neon lamp fed from an audio frequency generator. It was found that by using a "bound" base circuit, the frequency properties of the phototransistors can be improved by approximately 1 order. Investigations showed that industrial plants producing P6 transistors can start the production of phototransistors without considerably changing the production technology. The phototransistors are not suitable for measuring small illuminances, due to their small working surface (2 mm^2). The minimum illuminance at a signal-to-

Card 3/4

Aspects of using ...

noise ratio of 10 is E_{min} = 0.05 lx. There are 9 figures, 3 Soviet-bloc and 2 non-Soviet-bloc references. The one reference to the English-language publication reads as follows: Wireless World, 1958, VIII, v. 764, no. 8, 391-394.

4

Card 4/4

LUKOSHKIN, Anatoliy Petrovich. Prinimal uchastiye GOLUBKOV, A.P., inzh.; ALEKSANDROVA, A.A., red.

[Radar amplifiers with a wide input signal range] Radiolokatsionnye usiliteli s bol'shim diapazonom vkhodnykh signalov. Moskva, Sovetskoe radio, 1964. 254 p.
(MIRA 17:10)

25660
S/080/60/033/012/027/024
D209/D305

5.2200 1087, 1273, 1530

AUTHORS: Usachev, P.V., Golubkov, A.V., and Volosamova, T.S.

TITLE: Synthesis of HgSe and HgTe

PERIODICAL: Zhurnal prikladnoy khimii, v. 33, no. 12, 1960, 2771 - 2772

TEXT: Since little information has been published on the synthesis of HgSe and HgTe, this question is considered in some detail by the authors. Examination of the relevant literature shows that methods for synthesizing HgSe and HgTe were respectively developed by A.I. Blum et al (Ref. 1: Zh. tekh. fiziki, 21, 316, 1951) and E.I. Nikol'skaya et al (Ref. 2: Zh. tekh. fiziki, 25, 1347, 1955). Certain aspects of the preparation of HgTe have also been studied by O.D. Elpat'yevskaya et al (Ref. 3: Zh. tekh. fiziki, 26, 2154, 1956) and I.M. Tsidilkovskiy (Ref. 4: Zh. tekh. fiziki, 27, 1744, 1957), while R.O. Carlson and other scientists have devised a modified process for obtaining this compound. The basic materials are

Card 1/3

25660
S/080/60/033/012/017/024
D209/D305

Synthesis of HgSe and HgTe

Se, processed Te and purified Hg. The experimental apparatus consists of a thick-walled ampoule with a capacity of 35 - 40 cm^3, a length of 110 mm, an inner diameter of 20 mm and an internal pressure of about 40 atm. After insertion of the powdered Te and Se and Hg amalgam the ampoule is placed horizontally inside a stout copper vessel in the furnace, the apertures of the copper vessel and furnace being sealed with asbestos for heat-insulation. In the case of HgSe the ampoule temperature is brought to 800° for 6 - 8 hours and is then cooled after a 20 - 30 minute period of soaking; a temperature of 675° is required for the formation of HgTe. The selenide and telluride thus obtained have a glistening color, the former substance being slightly darker with a bluish hue. Their respective melting points are 793° and 667°. In the opinion of the authors there are three points worthy of further consideration. The first and most important is the need for fine grinding of Se and Te to ensure their reaction with Hg, although this may entail the risk of their slight oxidation during pulverization. Tests conducted by the authors, however, indicate that the essential properties

Card 2/3

Synthesis of HgSe and HgTe

of HgTe -- its electroconductivity and thermoelectromotive force -- prepared from both coarse and powdered Te are almost identical. Secondly, the horizontal position of the ampoule prevents any fracturing that might result from the increase in volume of the reaction mixture at a temperature of 200 - 500°. The third feature is the appearance of small amounts of mercury after the heating and cooling of the chalcide in consequence of the uneven temperature inside the ampoule. During the reaction this gaseous mercury both inhibits the dissociation and vaporization of the chalcide and restricts its secretion. Free mercury is not detected in reactors with no temperature gradient. Decomposition of HgSe and HgTe can also be avoided by introducing a small quantity of Hg into the heated ampoule. There are 6 references: 4 Soviet-bloc and 2 non-Soviet-bloc. The reference to the English-language publications read as follows: R.O. Carlson, Phys. Rev., III, 2nd ser., 476, 1958; W.O. Lawson et al, Phys. and Chem. of Solids, 9, 325, 1959.

SUBMITTED: April 5, 1960

Card 3/3

5

Semiconducting properties of nicklous oxide. V. P. Zhuze, A. I. Shelykh.

Mobility of current carriers in ferro-and antiferro-magnetic material Ya. M. Ksendzov.

Electrical properties of chalcogenides of rare earth elements. A. V. Golubkov, Ye. V. Goncharova, V. P. Zhuze, V. M. Sergeyeva.

Report presented at the 3rd National Conference on Semiconductor Compounds, Kishinev, 16-21 Sept 1963

ACCESSION NR: AP4011764 S/0181/64/006/001/0257/0267

AUTHORS: Zhuze, V. P.; Golubkov, A. V.; Goncharova, Ye. V.; Sergeyeva, V. M.

TITLE: Electrical properties of rare earth compounds (cerium subgroup) with members of the sulfur group

SOURCE: Fizika tverdogo tela, v. 6, no. 1, 1964, 257-267

TOPIC TAGS: electrical properties, rare earth, cerium subgroup, sulfur group, resistivity, thermal conductivity, thermoelectromotive force, LaS, CeS, PrS, NdS, LaSe, CeSe, PrSe, NdSe, LaTe, CeTe, PrTe, NdTe

ABSTRACT: The authors have synthesized the compounds LaS, CeS, PrS, NdS, LaSe, CeSe, PrSe, NdSe, LaTe, CeTe, PrTe, and NdTe. They determined the dependence of resistivity and thermoelectromotive force on temperature in the interval 300-1300K, and they measured the thermal conductivity at room temperature. The resistivity increases moderately but steadily with increase in temperature for each compound. The thermoelectromotive force declines with rise in temperature, as shown in Fig. 1 on the Enclosures. Many of the properties of the compounds are

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ACCESSION NR: AP4011764

summarized in Table 1 on the Enclosures. The results of measurements indicate that the investigated compounds have the nature of metallic conductors. "We take this opportunity to express our sincere thanks to our co-workers at the x-ray laboratory of IPAN, I. A. Zaslavskiy and T. B. Zhukova for x-ray analyses of the samples and also to the co-workers at our laboratory, M. A. Demina dnd T. I. Komarova for aid in preparing the samples." Orig. art. has: 6 figures, 4 tables, and 6 formulas.

ASSOCIATION: Institut poluprovodnikov AN SSSR, Leningrad (Institute of Semiconductors AN SSSR)

SUBMITTED: 30Jul63 DATE ACQ: 14Feb64 ENCL: 02

SUB CODE: PH NO REF SOV: 003 OTHER: 025

Card 2/4

ZHUZE, V.P.; GOLUBKOV, A.V.; TONCHAROVA, Ye.V.; KOMAROVA, T.I.; SERGEYEVA, V.M.

Electric properties of samarium sulfide. Fiz. tver. tela 6 no.1: 268-271 Ja '64. (MIRA 17:2)

1. Institut poluprovodnikov AN SSSR, Leningrad.

TRANSFER IMAGE SERIES

ACCESSION NR: AP4013500 S/0181/64/006/002/0430/0435

AUTHORS: Devyatkova, Ye. D.; Zhuze, V. P.; Golubkov, A. V.; Sergeyeva, V. M.; Smirnov, I. A.

TITLE: The thermal conductivity of Sm, P, and their simple chalcogen compounds

SOURCE: Fizika tverdogo tela, v. 6, no. 2, 1964, 430-435

TOPIC TAGS: thermal conductivity, samarium, praseodymium, chalcogen, crystal lattice conductivity, rare earth

ABSTRACT: This paper stems from a lack of thermal-conductivity information on rare-earth compounds and their compounds that have been recently studied in considerable detail for other properties. The compounds studied (PrS, PrSe, PrTe, and SmS) were synthesized from the constituent elements by the method described in Rare Earth Research (p. 135, 223, Ed. by E. V. Kleber, N. Y., 1961), and the thermal conductivity was measured on the "A" setup of Ye. D. Devyatkova, A. V. Petrov, I. A. Smirnov, and B. Ya. Moyzhes (FTT, 2, 738, 1960). Measurements on Sm, Pr, and the indicated compounds were made in the temperature interval 80-460K.

Card 1/2

ACCESSION NR: AP4013500

The authors found that a considerable part of the total thermal conductivity (up to 30-50%) in these substances is crystal-lattice conductivity. The temperature dependence of this lattice conductivity may be explained by two scattering processes: phonons by phonons and phonons by electrons. Orig. art. has: 6 figures, 2 tables, and 5 formulas.

ASSOCIATION: Institut poluprovodnikov AN SSSR, Leningrad (Institute of Semiconductors AN SSSR)

SUBMITTED: 30Jul63	DATE ACQ: 03Mar64	ENCL: 00
SUB CODE: IC, SS	NO REF SOV: 004	OTHER: 009

Card 2/2

ACCESSION NR: AP4039673 S/0181/64/006/006/1813/1817

AUTHORS: Devyatkova, Ye. D.; Golubkov, A. V.; Kudinov, Ye. K.; Smirnov, I. A.

TITLE: The effect of spin phonon interaction on the thermal conductivity of MnTe

SOURCE: Fizika tverdogo tela, v. 6, no. 6, 1964, 1813-1817

TOPIC TAGS: Neel temperature, spin phonon interaction, phonon phonon collision, thermal conductivity, magnon, manganese telluride

ABSTRACT: The authors have measured the thermal conductivity, the thermoelectromotive force, and the resistivity of a number of MnTe samples, both above and below the Néel temperature. The samples were prepared at a pressure of 8000 kg/cm^2 and then annealed in argon at 650C for 60 hours. The temperature dependence of the thermal resistance may be represented by two straight lines, one for temperatures below the Néel temperature (100-200K) and one for temperatures above (310-480K). Between these occurs a transition zone. At the lower temperatures, thermal resistance is determined by phonon interaction, and it increases normally with temperature. Transfer of heat by magnons may also contribute to heat conduction.

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ACCESSION NR: AP4039673

At temperatures considerably greater than the Néel temperature, phonon-magnon scattering is ineffective, and thermal conductivity is determined by phonon-phonon collisions. The thermoelectromotive force and the resistivity both increase sharply in the temperature region of 200-300K. The cause of the increase in thermoelectromotive force is not clear. It may be due to complex structure or it may be due to entrainment of electrons by magnons. Orig. art. has: 2 figures.

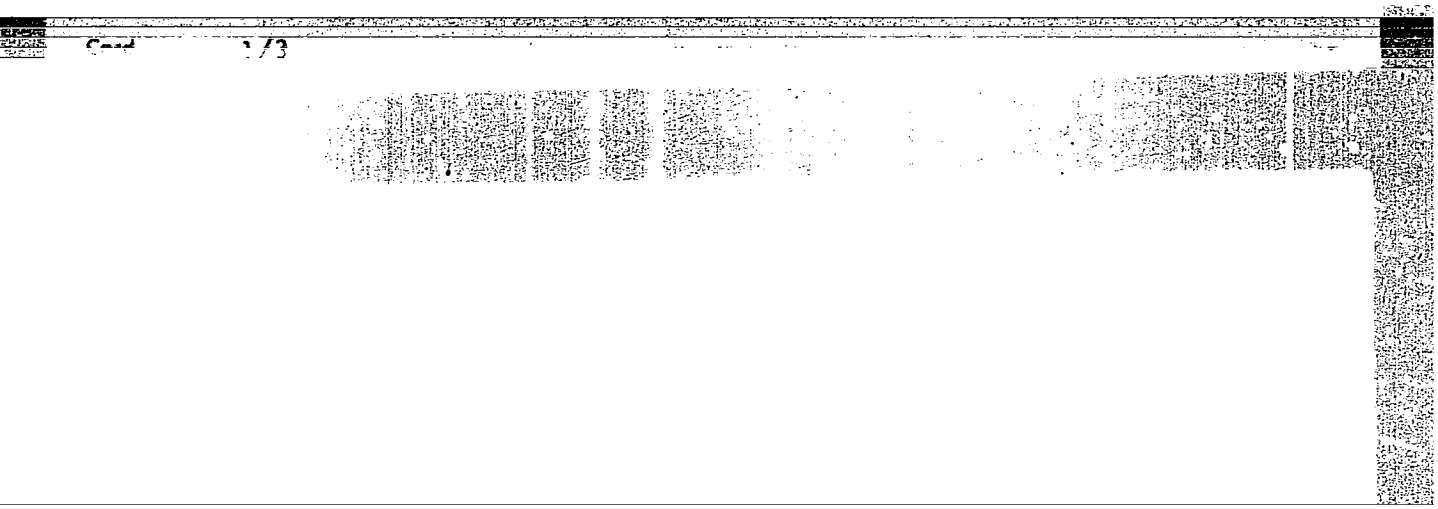
ASSOCIATION: Institut poluprovodnikov AN SSSR, Leningrad (Institute of Semiconductors, AN SSSR)

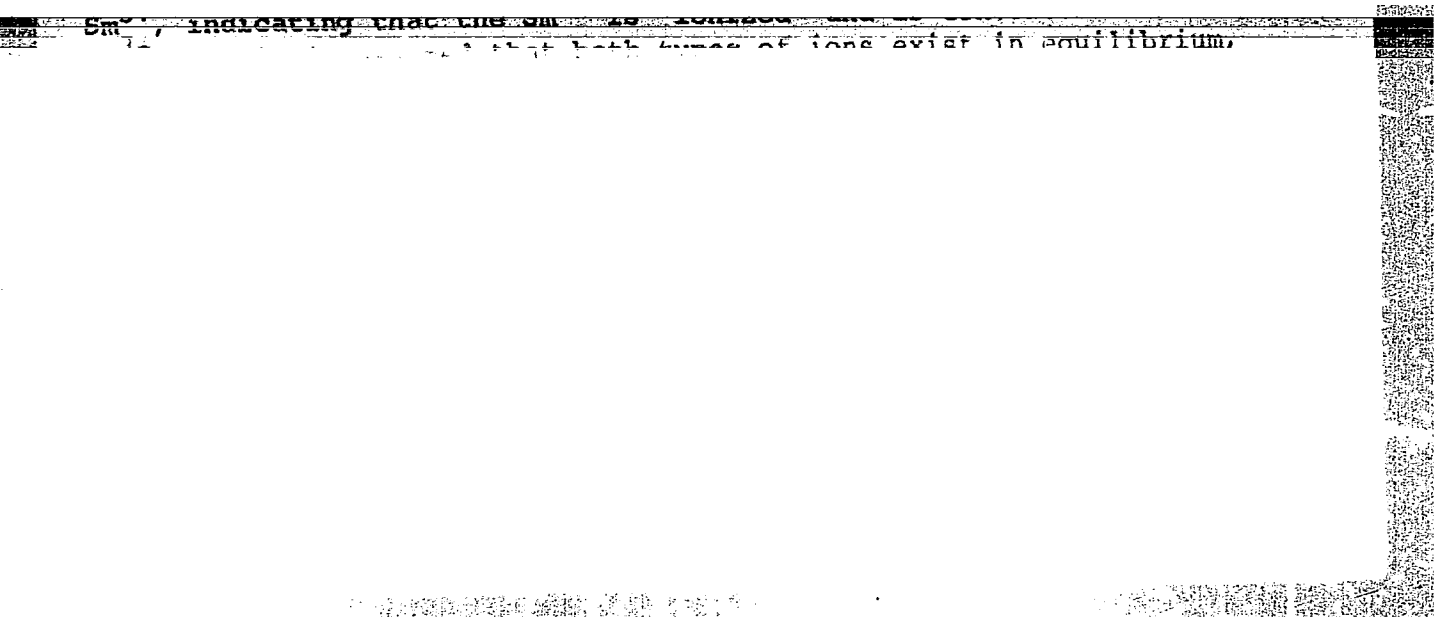
SUBMITTED: 15Jan64 DATE ACQ: 19Jun64 ENCL: 00

SUB CODE: EC, SS NO REF SOV: 004 OTHER: 006

Card 2/2

APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000515920003-6"





APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000515920003-6"

L 6320-66 EWT(m)/EWP(t)/EWP(b) IJP(c) JD/JG UR/0181/65/007/008/2430/2436

ACCESSION NR: AP5019861

AUTHOR: Golubkov, A. V.; Goncharova, Ye. V.; Zhuze, V. P.; Manoylova, I. G. 71 69 B

TITLE: On the mechanism of transport phenomena in samarium sulfide

SOURCE: Fizika tverdogo tela, v. 7, no. 8, 1965, 2430-2436 27

TOPIC TAGS: samarium compound, Hall effect, electron mobility, temperature dependence, activation energy, transport phenomenon, electron transition, thermoelectric power, conduction band, forbidden zone width

ABSTRACT: The authors investigated the temperature dependence of the Hall emf in several samples of SmS in the interval 300--1000K. The synthesis of the material and the procedure for preparing the samples for the measurements, as well as the method for measuring the conductivity and the differential thermoelectric power were described by the authors elsewhere (FTT v. 6, 268, 1964). The Hall emf was measured on dc in a constant magnetic field at ~10^{-4} mm Hg, a maximum current density through the sample 10 a/cm^2, and a maximum magnetic field intensity 30 kOe. The activation energy of transition of the electrons from the 4f state into the conduction bands is estimated from these measurements and from the measured temperature dependences of the electric conductivity and the differential thermoelectric power. A value of 0.23 ev was obtained for the activation energy, and was in good

Card 1/2 0902 0004

L 6320-66
ACCESSION NR: AP5019861 2

agreement with values of the width of the forbidden gap, obtained by two different methods (0.22 and 0.18 ev). The Hall mobility was found to range from 5 to 10 $cm^2v^{-1}sec^{-1}$ at room temperature, rising to a maximum of 10 near 500K, and then decreasing sharply with increasing temperature. The width of the conduction band is estimated at 3 ev and the effective mass is estimated at 0.78 m_0. Some ideas concerning the mechanism of electron transport in the samarium sulfide are discussed. "The authors thank M. I. Klinger for a discussion of the results." Orig. art. has: 6 figures and 4 formulas.

ASSOCIATION: Institut poluprovodnikov AN SSSR, Leningrad (Institute of Semiconductors AN SSSR)

SUBMITTED: 12Mar65 ENCL: 00 SUB CODE: SS, EM

NR REF SOV: 004 OTHER: 005

Card 2/2

L 8971-66 EWT(l)/EWT(m)/EWP(t)/EWP(b) IJP(c) JD/JG
ACC NR: AP5027418 SOURCE CODE: UR/0181/65/007/011/3372/3377

AUTHOR: Adamyan, V. Ye.; Golubkov, A. V.; Loginov, G. M.; Fedorov, V. N.

ORG: Institute of Semiconductors, AN SSSR, Leningrad (Institut poluprovodnikov AN SSSR)

TITLE: Investigation of magnetic susceptibility in neodymium chalcogenides

SOURCE: Fizika tverdogo tela, v. 7, no. 11, 1965, 3372-3377

TOPIC TAGS: neodymium compound, sulfide, telluride, selenide, magnetic susceptibility

ABSTRACT: Magnetic susceptibility was measured as a function of temperature in NdS, NdSe, NdTe and Nd_2S_3 to determine: 1) the effect of gradual changes in the anion on the behavior of the neodymium; 2) whether Nd shows another valence besides three; 3) whether or not these compounds have ferromagnetic or antiferromagnetic properties. The experimental equipment and the method used are described in detail. The measurements were made in the 100-1300°K range. Curves are given for the relationship between temperature and inverse paramagnetic susceptibility for the chalcogenides which were studied. These curves are compared with theoretical curves calculated from Van Vleck's formula. Satisfactory agreement is found between empirical and theoretical data for Nd^{3+} at a screening number $\sigma = 34$, and for Nd^{4+} at $\sigma = 35$. However, theoretical calculations on the type and concentration of current carriers as well as mea-

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ACC NR: AP5027418

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surements of the Hall effect give evidence of a valence of three in neodymium chalcogenides. In conclusion, the authors consider it their pleasant duty to thank Professor G. A. Smolenskiy for directing the work, Ya. V. Vasil'yev for his assistance in adjusting the automatic control circuits, and V. M. Sergeyeva and Ye. V. Goncharova for assistance in discussion of the data. Orig. art. has: 3 figures, 1 table, 4 formulas.

44,55

SUB CODE: 20,07/ SUBM DATE: 02Apr65/ ORIG REF: 003/ OTH REF: 011

44,55 44,55 44,55

Card 2/2

L 41591-66 EWT(m)/EWP(w)/T/EWP(t)/ETI IJP(c) RDW/JD/JG

ACC NR: AP6018537 SOURCE CODE: UR/0181/66/008/006/1761/1771

AUTHOR: Golubkov, A. V; Devyatkova, Ye. D.; Zhuze, V. P.; Sergeyeva, V. M.; Smirnov, I. A.

ORG: Institute of Semiconductors, AN SSSR, Leningrad (Institut poluprovodnikov AN SSSR)

TITLE: Thermal conductivity of lanthanum and its monochalcogenites

SOURCE: Fizika tverdogo tela, v. 8, no. 6, 1966, 1761-1771

TOPIC TAGS: lanthanum, lanthanum compound, thermal conduction, rare earth metal, crystal lattice, thermal emf, temperature dependence, phonon scattering, electron scattering

ABSTRACT: This is a continuation of earlier research by the authors (FTT v. 6, 430, 1964) on the thermal conductivity of rare-earth metals and their compounds, and is devoted to a separation of the electronic and lattice components of the thermal conductivity of La, LaTe, LaSe, and LaS. The lanthanum monochalcogenites were synthesized from the constitutent elements by a method described in detail in the literature (Rare Earth Research, 223. Ed. by E. V. Kleber, NY, 1961; A. V. Golubkov et al., Neorg. mat. v. 2, 77, 1966) and were pressed into briquettes at high pressure followed by annealing. The measurement apparatus was described by the authors earlier (FTT v. 2, 738, 1960). The theoretical expressions for the two thermal-conductivity components are derived. From an analysis of the experimentally measured

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L 41591-66

ACC NR: AP6018537

thermal conductivity, resistivity, and thermal emf and their temperature dependence it is deduced that an appreciable fraction of the total thermal conductivity is due to the crystal lattice. The temperature dependence of the lattice component can be attributed to the presence of two scattering mechanisms, phonons by phonons and phonons by conduction electrons. The low carrier mobility observed in the experiments is due essentially to strong electron-phonon interaction. The presently available data on LaTe, LaSe, and LaS are summarized in a table. The authors thank A. I. Zaslavskiy and T. B. Zhukova for the x-ray analysis, V. M. Muzhdaba and Ye. V. Goncharova for supplying data on the residual resistance and on the concentration, and Doctor Suchat for information on the degree of ionicity of the materials measured in this study. Orig. art. has: 7 figures, 7 formulas, and 5 tables.

SUB CODE: 20/ SUBM DATE: 03Nov65/ ORIG REF: 010/ OTH REF: 022

Card 2/2 MLP

ACC NR: AP7005846 SOURCE CODE: UR/0181/66/008/012/3578/3582

AUTHOR: Tikhonov, V. V.; Golubkov, A. V.; Smirnov, I. A.

ORG: Institute of Semiconductors AN SSSR, Leningrad (Institut poluprovodnikov, AN SSSR)

TITLE: Specific heat of NdS, LaSe, and LaTe

SOURCE: Fizika tverdogo tela, v. 8, no. 12, 1966, 3578-3582

TOPIC TAGS: neodymium compound, lanthanum compound, sulfide, selenide, specific heat, rare earth element

ABSTRACT: In view of the lack of data on the specific heats of these and other rare-earth compounds, the authors measured their specific heats in the temperature interval 900 - 390K, and determined their Debye temperature. The compounds were synthesized from the elements by a method described elsewhere (Neorganich. materialy v. 2, 77, 1966). The specific heat was measured in a Nernst adiabatic calorimeter. The total specific heat is found to satisfy the empirical formula $C_{tot} = \gamma T + AT^3$, and the values of γ are tabulated (AT^3 is the specific heat at constant volume). The Debye temperature was found to vary linearly with the atomic weight, and this is used to determine the Debye temperature and the melting temperature of all the monochalcogenides of rare-earth elements. A table listing the values of the specific heats at constant volume and constant temperature for the three investigated substances, and of the Debye temperatures and the melting points for all the monochalcogenides of the

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ACC NR: AP7005846

rare-earth elements are presented. The authors thank Ye. D. Devyatkov and V. P. Zhuze for a discussion of the work. Orig. art. has: 2 figures, 5 formulas, and 3 tables.

SUB CODE: 20/ SUBM DATE: 24May66/ ORIG REF: 004/ OTH REF: 014.

Card 2/2

GOLUBKOV, A.V.

Determining the actual thickness of ore bodies from well intersections. Razved. i okh. nedr 30 no.10:27 O '64. (MIRA 18:11)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut ekonomiki mineral'nogo syr'ya i geologorazvedochnykh rabot.

GOLUBKOV, A.Ye.; GABALAYEV, A.T.; DOLZHANSKAYA, V.A.; ARTEMOVA, R.P.

Mechanizing the cutting of ampules and their placing in racks. Med.prom. 13 no.11:19-23 N '59. (MIRA 13:3)

1. Moskovskiy khimiko-farmatsevticheskiy zavod No.9.
(DRUG INDUSTRY) (GLASS CONTAINERS)

GOLUBKOV, B. N

Oct 48

USSR/Engineering
Calorimeters
Fuel Conservation

"The MEI Mechanical Calorimeter," B. N. Golubkov, Cand Tech Sci, 2 pp

"Za Ekonomiyu Topliva" Vol V, No 10

Very briefly describes books, pamphlets, and magazine articles on fuel economy. Includes V. I. Zhumko's book, "Combustible Gases From Baltic Shales," and A. G. Vartanov's article, "Reconstruction of Steam Boilers in the Azerbaydzhan Power System," which describes reconstruction of boilers built by Babcock-Wilcox and Chapman.

43/49T47

GOLUBKOV, B.N.

112-2-2873

Translation from: Referativnyy Zhurnal, Elektrotekhnika, 1957, Nr 2, p. 44 (USSR)

AUTHOR: Golubkov, B.N.

TITLE: An Experimental Heat Pump Installation at a Hydrostation (Opytnaya ustanovka teplovogo nasosa na gidrostantsii)

PERIODICAL: Tr. Mosk. energ. in-ta, 1956, Nr 24, pp. 93-106

ABSTRACT: The heat generated during the operation of hydrostation generators (losses in the iron and copper) can be utilized for heating by installing a heat pump. Analysis of five variants of heat pump installation design has shown the superiority of the water-air-freon-water system. The air circulating in the generator cooling system flows to the air cooler where it exchanges its heat against the cooling water which is cooled in its turn in the freon vaporizer. The freon vapors are compressed by the piston compressor and pass to the system water heater where they condense. This design provides a good refrigeration system during the summer. Freon 12 (difloro dichloromethane) can be used as the working agent in heat pump plants. The introduction of the heat pump to satisfy heating needs at GES (Hydroelectric Power Station) and the abandonment of electric heaters has resulted in a real economy in electric power. However, the cost of heat generated in this way is considerably high due to the high cost of the refrigeration equipment, the freon, and the low capacity of the plant.

V.Ya.G.

Card 1/1

GOLUBKOV, B.N.

LUKNITSKIY, V.V. [deceased], doktor tekhn. nauk, prepodavatel'; SOKOLOV, Ye.Ya., doktor tekhn. nauk, prepodavatel'; LEBEDEV, P.D., doktor tekhn. nauk, prepodavatel'; GIMMEL'FARB, M.L., kand. tekhn. nauk, prepodavatel'; LAVROV, N.V., doktor tekhn. nauk, prepodavatel'; IVANTSOV, G.P., kand. tekhn. nauk, prepodavatel'; GOLUBKOV, B.N., kand. tekhn. nauk, prepodavatel'; SHERSTYUK, A.N., kand. tekhn. nauk, prepodavatel'; NIKITIN, S.P., kand. tekhn. nauk, prepodavatel'; CHISTYAKOV, S.F., kand. tekhn. nauk., prepodavatel'; DUDNIKOV, Ye.G., doktor tekhn. nauk, prepodavatel'; BAKLASTOV, A.M., kand. tekhn. nauk, prepodavatel'; VEKSHA, M.I., kand. tekhn. nauk, prepodavatel'; GERASIMOV, S.G., prof., red.; KAGAN, Ya.A., dots., red.; AYZENSHTAT, I.I., red.; VORONIN, K.P., tekhn. red.; LARIONOV, G.Ye., tekhn. red.

[Heat engineering handbook] Teplotekhnicheskii spravochnik. Moskva, Gos. energ. izd-vo. Vol.2. 1958. 672 p. (MIRA 11:10)
(Heat engineering)

GOLUBKOV, B.N., kand. tekhn. nauk

Temperature drop along a double-pipe channelless heat conductor. Prom. energ. 18 no.5:30-32 My '63. (MIRA 16:6)

(Steampipes) (Heat--Transmission)

GOLUBKOV, B.N., kand. tekhn. nauk

Use of geothermal waters in power generation. Elek. sta. 35 no.2:90 Ag '64. (MIRA 17:12)

GOLUBKOV, G.V.

Geographic poles and petrified trees. Priroda 54 no.9:122-123 S '65. (MIRA 18:9)

1. Ural'skoye geologicheskoye upravleniye, Sverdlovsk.

GOLUBKOV, G.Ye.; KOLGANOVA, V.A.

Effect of polyalumoorganosiloxanes on the physical properties of polydimethylpolyphenylsiloxanes. Plast.massy no.1:24-27 '64. (MIRA 17:6)

37773
S/661/61/000/006/065/081
D243/D302

5.3700
5.4100

AUTHOR: Golubkov, G. Ye.

TITLE: The relationship between the electrical properties of some organic silicate compounds and their composition and structure

SOURCE: Khimiya i prakticheskoye primeneniye kremneorganicheskikh soyedineniy; trudy konferentsii, no. 6: Doklady, diskussii, resheniye. II Vses. konfer. po khimii i prakt. prim. kremneorg. soyed., Len. 1958. Leningrad Izd-vo AN SSSR, 1961, 286-288

TEXT: The author investigated the relationship between electrical properties and structure and temperature of several types of compounds having trimethylsilyl groups on the end of the molecule and the central silicon atoms joined to various radicals (CH_3, C_2H_5, C_6H_5, ClC_6H_4, $C_6H_5NHCH_2$). Besides polydimethylsiloxanes, polymethylphenylsiloxanes with a small number of joints and structurised

Card 1/2

S/661/61/000/006/065/081
D243/D302

The relationship between ...

polymethyphenylsiloxanes, the basis of the commercial lacquers K-44, K-47, K-53 and K-55 were investigated. ε and tanδ were measured at 200 - 1.5 x 10^6 c/s and -180°C and above, and the relationship of conductivity to temperature was studied. All compounds have a relaxation type of relation of ε and tanδ to temperature and frequency. They become vitreous on gradual cooling, without abrupt changes in electrical properties. Details of the results obtained are given and it is concluded that changes of viscosity, conductivity, losses of conductivity and time of relaxation occur by similar mechanisms and that the electrical properties of these compounds may be controlled by altering their composition and structure. The electrical stability of these polymers is high (80 - 125 V/mm).

ASSOCIATION: Vsesoyuznyy elektrotekhnicheskiy institut im. V. I. Lenina, Moskva (All-Union Electrotechnical Institute im. V. I. Lenin, Moscow)

Card 2/2

GOLUBKOV, G.Ye.

Dependence of electrical and mechanical properties of organosilicon compounds on their composition and structure. Trudy VEI 71:35-120 '63. (MIRA 17:8)

ANDRIANOV, K.A.; GOLUBKOV, G.Ye.; ZABYRINA, K.I.; DZHENCHEL'SKAYA, S.I.; KOLGANOVA, V.A.; BOLONDAYEVA, N.I.

Thermooxidative degradation of polyphenylpolydimethylsiloxanes. Plast. massy no.2:22-25 '64. (MIRA 17:8)

Golubkov, G. E.

USSR / Electricity G

Abs Jour : Ref Zhur - Fizika, No 4, 1957, No 9633

Author : Andrianov, K.A., Golubkov, G.E.
Inst : Not given
Title : Electric Properties and Structure of Silicon-Organic Polymers

Orig Pub : Zh. tekhn. fiziki, 1956, 26, No 8, 1689-1695

Abstract : An investigation was made of the electric properties of polydimetylsiloxane, made by the method of catalytic condensation (I), the same polydimetylsiloxane, vulcanized by benzoil peroxide (Ia), polydimetylsiloxane, obtained by thermal condensation (II), and polydiethylsiloxane (III) in the temperature range from -140 to + 200°. It was established that in the temperature range close to the vitrification temperature, all specimens have relaxation polarization. During

Card : 1/2

USSR / Electricity G

Abs Jour : Ref Zhur - Fizika, No 4, 1957, No 9633

Abstract : the cooling process of specimens of I, Ia, and II at definite temperatures one observes a slowing down of the cooling and even an increase in temperature of the specimens, and also a sharp increase in the dielectric constant, caused by the partial crystallization of the polymer. The crystallization temperatures of specimens I is 5 -- 7° higher than that of specimens II, which is explained apparently by the presence in the latter of longer macromolecules. In specimens of III, no effects connected with the crystallization have been observed probably owing to the considerable branching of their molecule chains, which prevent intermolecular interaction. For the same reason, the activation energy in the case of III amounts to merely 22 kcal/mole, while for I Ia, and II it is approximately 37 -- 40 kcal/mole.

Card : 2/2

Golubkov, G.Ye.

76-11-17/35

AUTHORS: Andrianov, K.A., Golubkov, G.Ye.

Title: The Electrical Properties and the Structure of 1,n-Hexamethyl-polychlorophenylethylsiloxanes (Elektricheskiye svoystva i stroyeniye 1,n-geksametilpolikhlorfeniletilsiloksanov)

PERIODICAL: Zhurnal Fizicheskoy Khimii, 1957, Vol.31, Nr 11, pp.2488-2494 (USSR)

ABSTRACT: On the strength of the investigations carried out the following may be said: 1.) The introduction of the chlorine atom into silicon-organic polymers of the 1.n-hexamethylpolychlorophenylethylsiloxanes series and an increase of the number of terms with chlorophenyl groups in the molecule increases the temperature of glass formation, the dielectricity constant, the activation energy of the viscous flow, and the conductometrically determined activation energy. 2.) The introduction into the 1.n-hexamethylpolychlorophenylethylsiloxane molecule of dimethylsiloxane terms instead of the chlorophenyl groups leads to a decrease of the intermolecular forces of interaction in comparison with molecules of the same silicon atom number, but with chlorophenyl radicals. 3.) Dipole moments of 1.n-hexamethylpolychlorophenylethylsiloxanes increase with molecule-chain grwoth. The introduction of 2 chlorine atoms into the phenyl group leads to a certain decrease of the dipole moments in

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The Electrical Properties and the Structure of 1,n-Hexamethylpolychlorophenylethylsiloxanes

76-11-17/35

comparison to those 1.n-hexamethylpolychlorophenylethylsiloxanes, which contain one and three chlorine atoms in the phenyl group. 4.) The 1.n-hexamethylpolychlorophenylethylsiloxanes have a relaxation character for the dependence of tgδ and ε on temperature and frequency. There are 4 figures, 3 tables, and 6 references, 5 of which are Slavic.

ASSOCIATION: Institute for Electric Engineering imeni V.I.Lenin, Moscow (Elektrotekhnicheskiy institut im.V.I.Lenina, Moskva)

SUBMITTED: July 16, 1956

AVAILABLE: Library of Congress

Card 2/2

GOLUBKOV, G. Ye.

L. M. Volkova, K. A. Andrianov, G. Ye. Golubkov, L. N. Makarova, and V. A. Odinets, "The Introduction of Polar Groups into Organic Radical at the Silicon Atom."

Report presented at the Second All-Union Conference on the Chemistry and Practical Application of Silicon-Organic Compounds held in Leningrad from 25-27 September 1958.
Zhurnal prikladnoy khimii, 1959, Nr 1, pp 238-240 (USSR)

ARTEL'YEV, B.K.; GOLUBKOV, G.Ye.; KRAVTSEVA, I.I.

Methods for testing the elasticity of winding conductors.
Trudy VEI no.62:288-295 '58. (MIRA 11:11)
(Electric conductors--Testing)

GOLUBKOV, G. Ye. Cand Tech Sci -- (diss) "Study of the relationship between the dielectric and mechanical properties of substances of high molecular weight and their composition and structure." Mos, 1959. 21 pp (State Committee of the Council of Ministers USSR on Automation and Machine Building. All-Union Order of Lenin Electrical Engineering Inst im V. I. Lenin), 150 copies. Printed by duplicating machine. Bibliography at end of text (10 titles) (KL, 49-59, 140)

ANDRIANOV, K.A.; GOLUBKOV, G.Ye.

Structure of 1,n-hexamethylacetoxymethylmethylsiloxanes and their physical properties. Vysokom.soed. 1 no.12:1801-1804 D '59. (MIRA 13:5)

1. Vsesoyuznyy elektrotekhnicheskiy institut.
(Siloxane) (Polymers)

81610

S/190/60/002/02/09/011
B004/B061

5.3830

AUTHORS: Andrianov, K. A., Golubkov, G. Ye.

TITLE: Polydimethylpolyphenylsiloxanes Obtained by Catalytic Condensation

PERIODICAL: Vysokomolekulyarnyye soyedineniya, 1960, Vol. 2, No. 2, pp. 279-283

TEXT: The authors synthesized polydimethylpolyphenylsiloxane (I) from phenyltrichlorosilane and dimethyldichlorosilane by catalytic condensation, and also polymer (II) whose trifunctional component is 25% larger than that of (I). As apart from (I), polymer (III) contains 5% of a trifunctional component, and polymer (IV) differs similarly from (II) (5% of tetrafunctional component). Polymer (V) contains polyaluminomethylphenylsiloxane. The following properties of the films of these polymers were examined: strength (Fig. 1), deformation and vitrification temperatures (Fig. 2), dependence of the thermomechanical properties on the preceding heat treatment (Fig. 3), absorption of benzene vapor

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Polydimethylpolyphenylsiloxanes Obtained by Catalytic Condensation

S/190/60/002/02/09/011
B004/B061

(Table 1), dielectric constant, and tan δ (Table 2). Polymer (I) had no interlaced structure. Polymer (II) showed greater strength than (I). Higher temperature caused flow in all polymers. The introduction of tetrafunctional monomers resulted in greater strength, wider temperature range of the highly elastic state, and interlacing. Polymers (III), (IV), and (V) revealed less swelling in benzene and no softening up to 550°C. The change in the dielectric constant and tan δ (examined at from -50 to 200°C and 100 ~ $1.5.10^6$ cps) is governed by a dipole-elastic mechanism (Ref. 4). These values are likewise more heat-resistant with polymers (III) and (IV). There are 3 figures, 2 tables, and 4 Soviet references.

ASSOCIATION: Vsesoyuznyy elektrotekhnicheskiy institut im. V. I. Lenina (All-Union Institute of Electrical Engineering imeni V. I. Lenin)

SUBMITTED: November 26, 1959

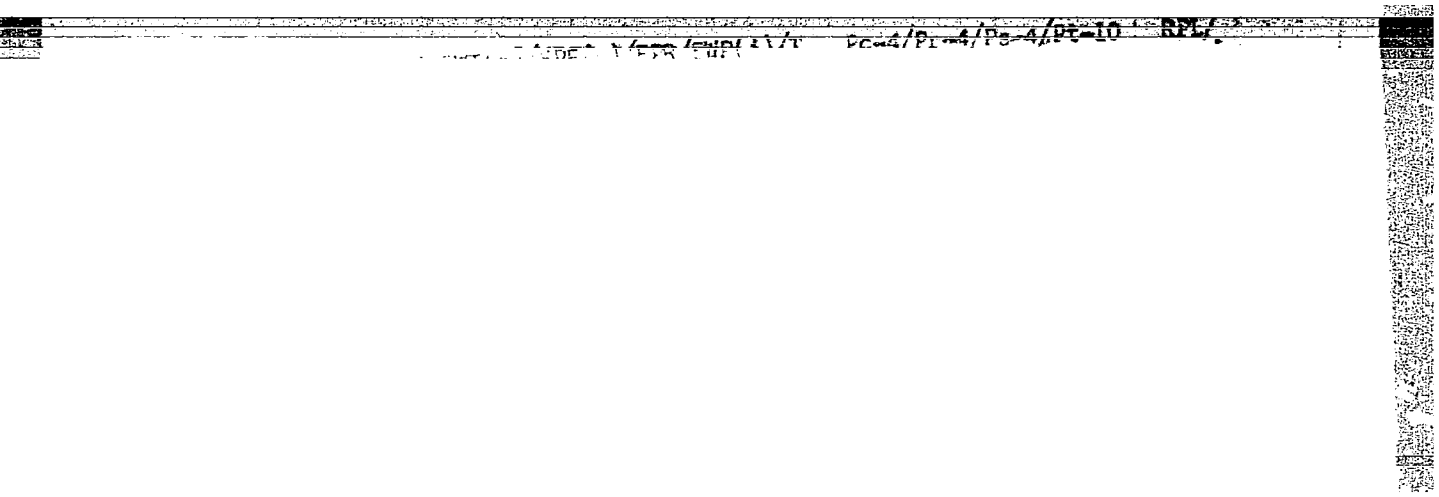
Card 2/2

ANDRIANOV, K.A.; GOLUBKOV, G.Ye.

Thermomechanical and electrical properties of epoxypolysiloxane polymers of various composition. Vysokom.soed. 4 no.9:1375-1379 S '62. (MIRA 15:11)

1. Vsesoyuznyy elektrotekhnicheskiy institut im. V.I. Lenina.

(Epoxy resins)
(Silicon organic compounds)



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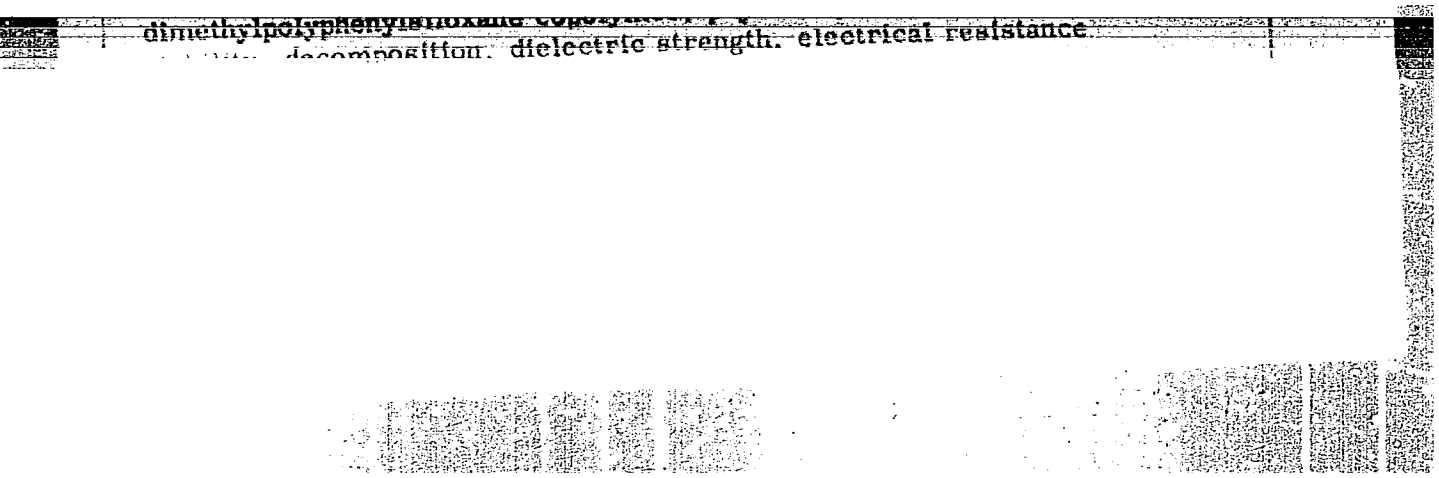

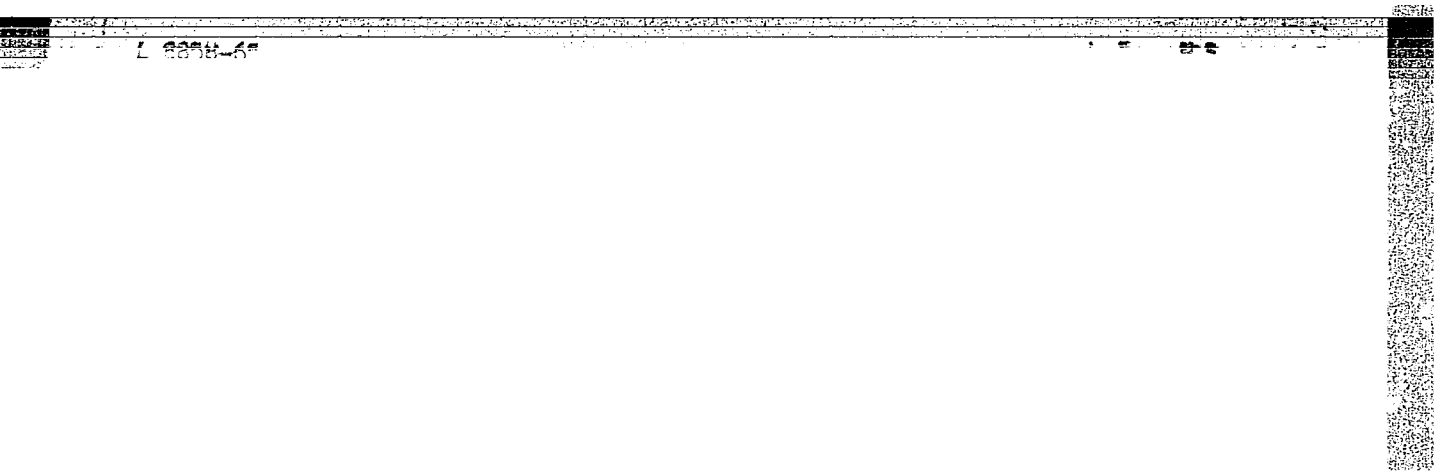

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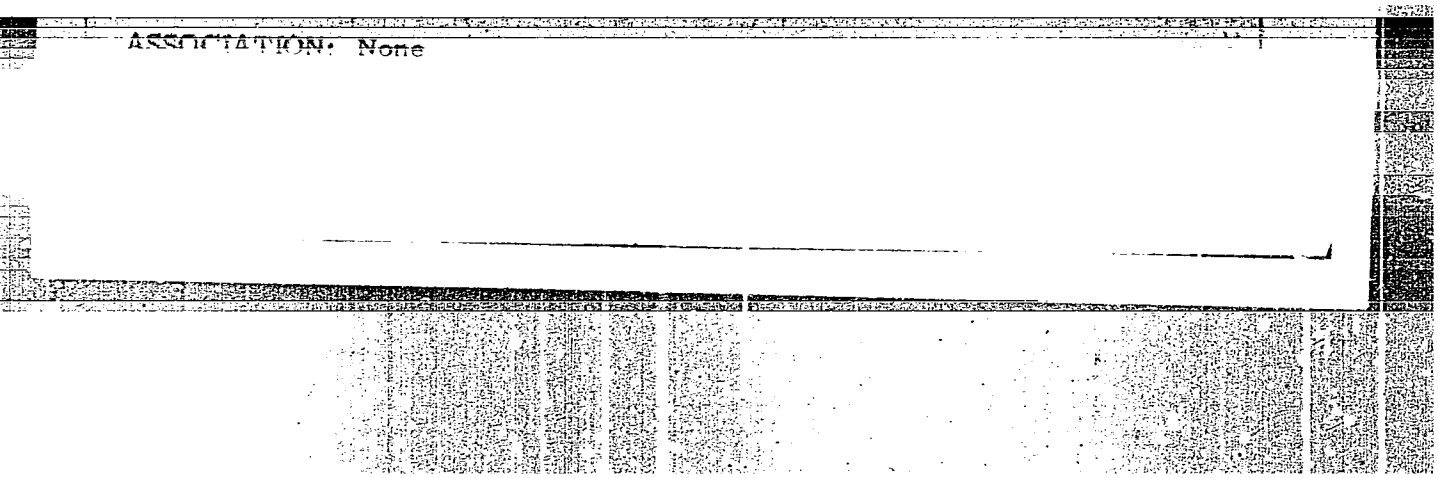

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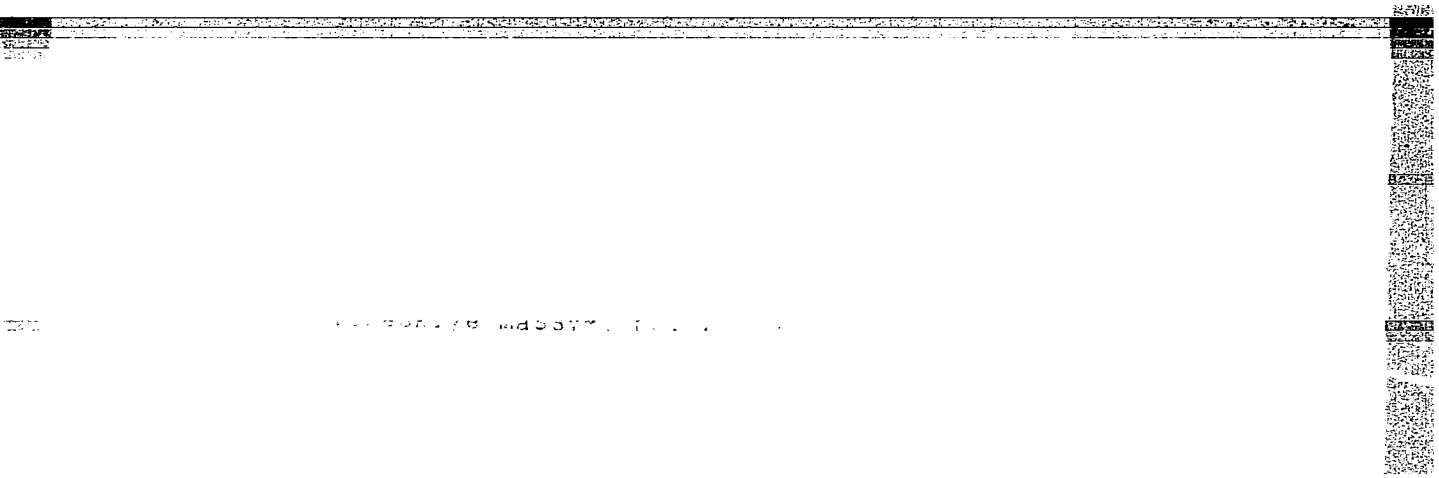

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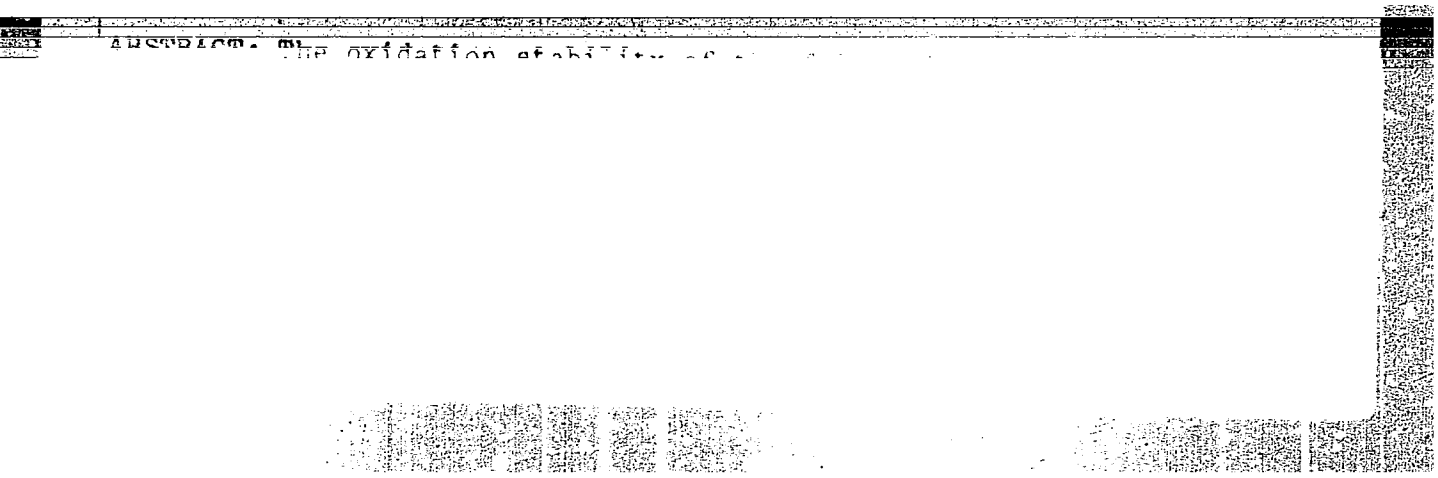

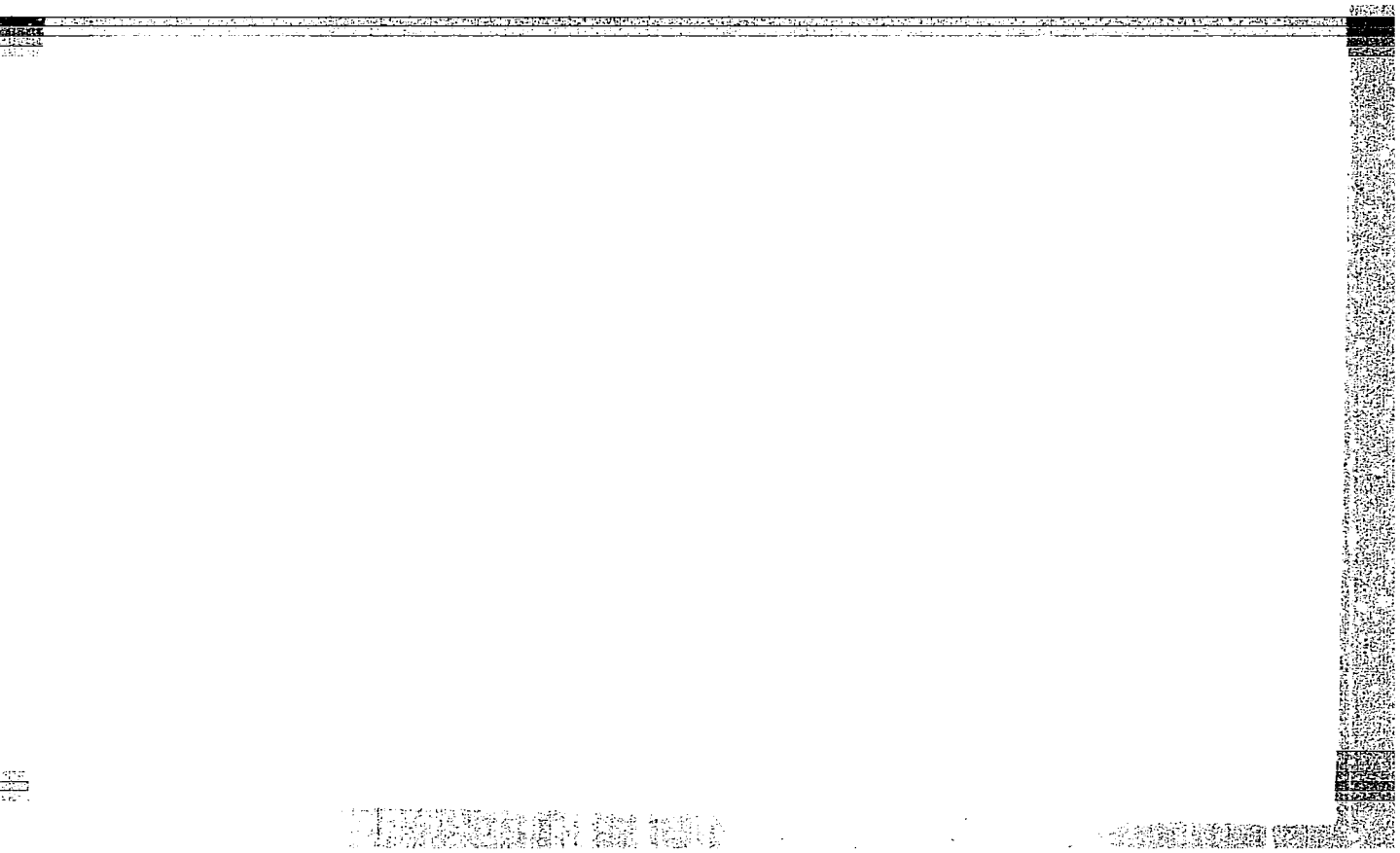

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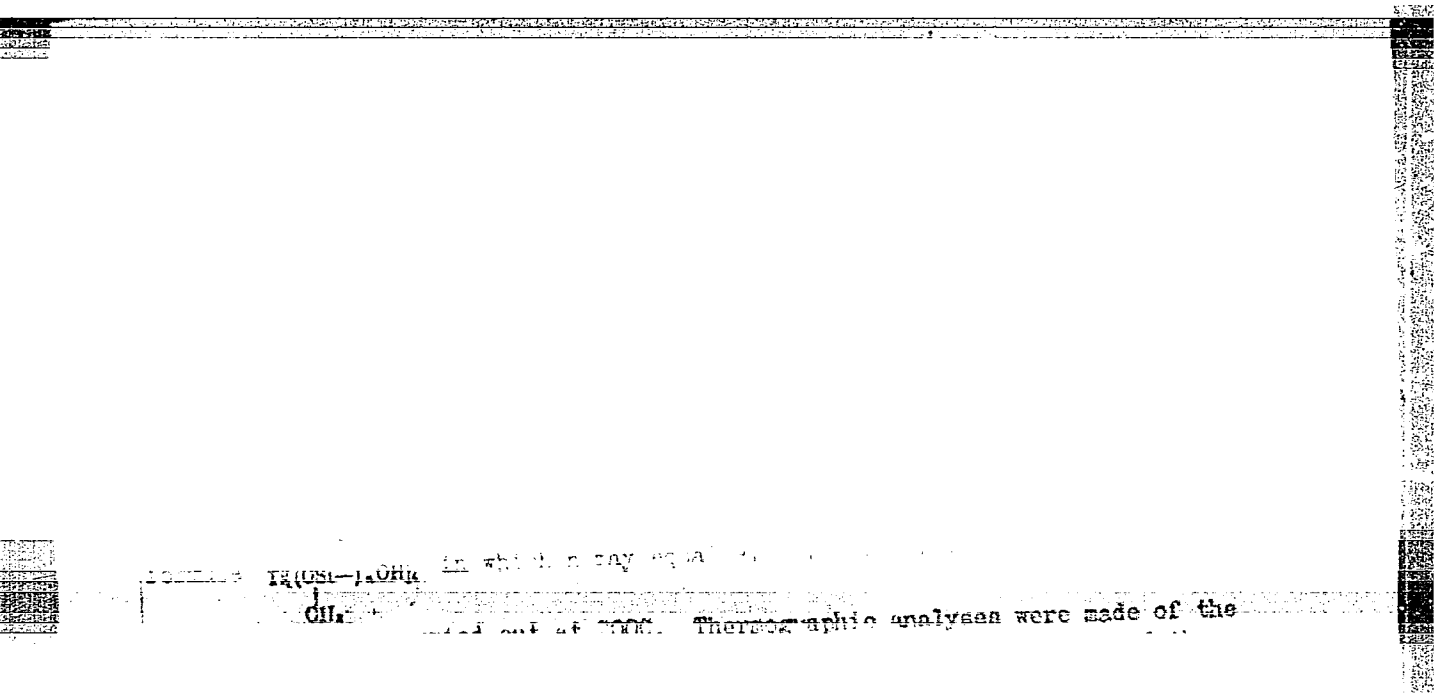
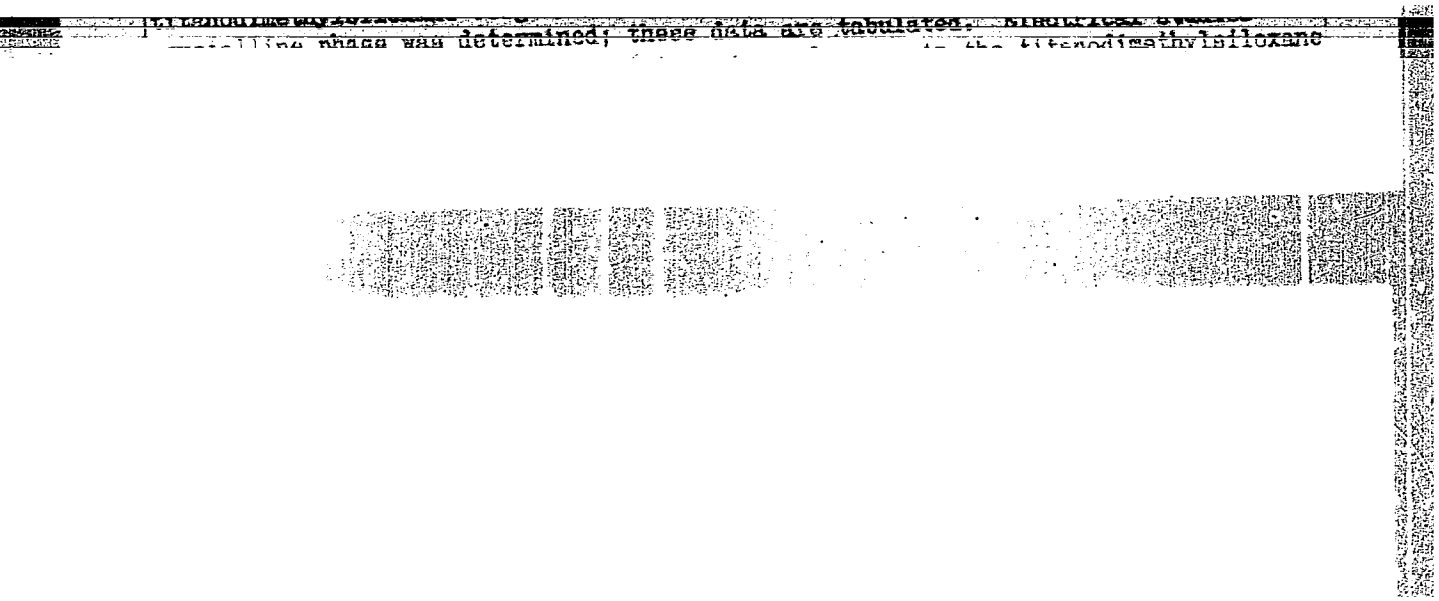
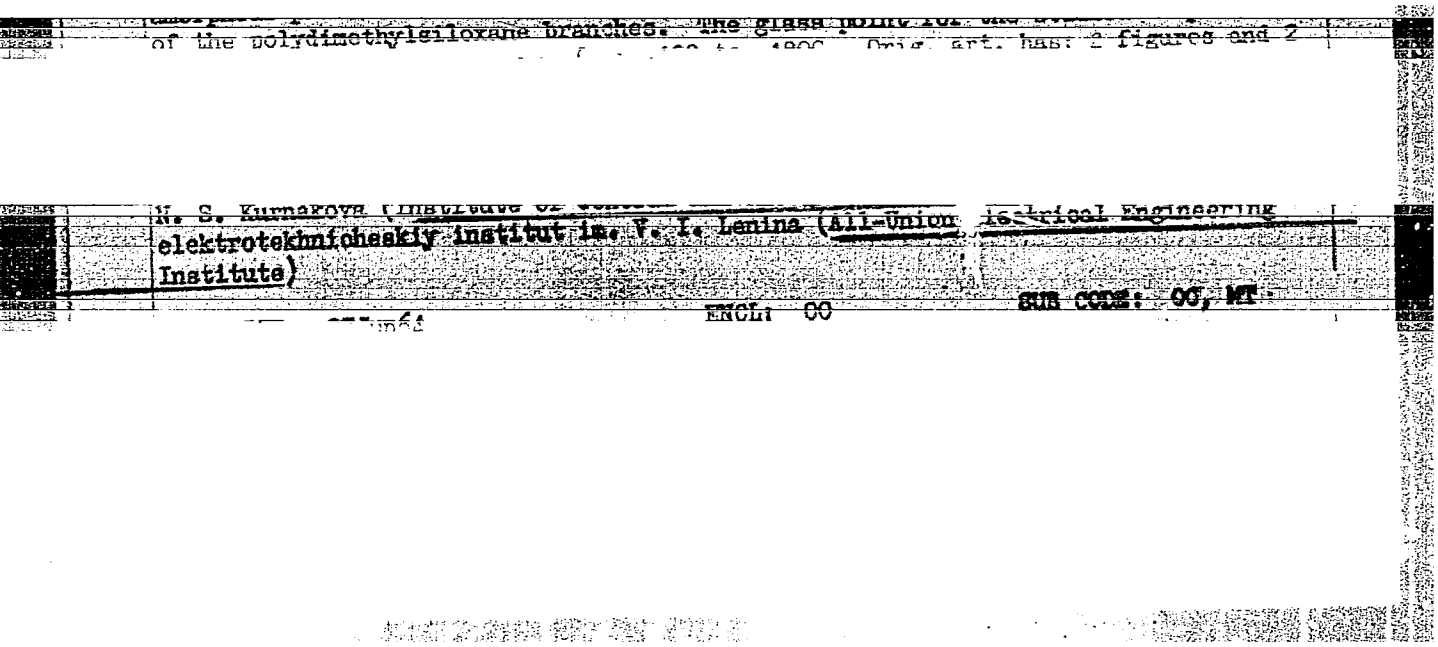
GOLUBKOV, G.Ye., kand. tekhn. nauk; KOLGANOVA, V.A., inzh.

Electrical properties of mica and mica base materials at high temperatures. Elektrotekhnika 35 no.10:15-16 O '64. (MIRA 17:11)



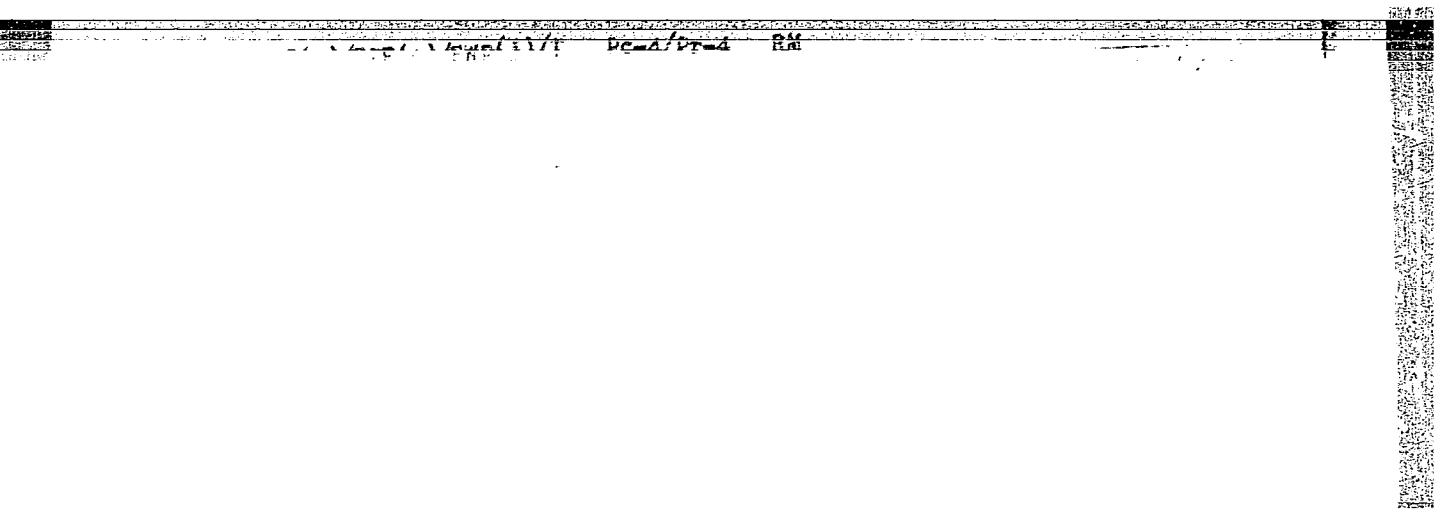




of the polydimethylsiloxane branches. Orig. art. has: 2 figures and 2

N. S. Kurnakova (Chairman of ...); elektrotekhnicheskiy institut im. V. I. Lenina (All-Union ... Institute)

ENCL: 00 SUB CODE: OC, MT



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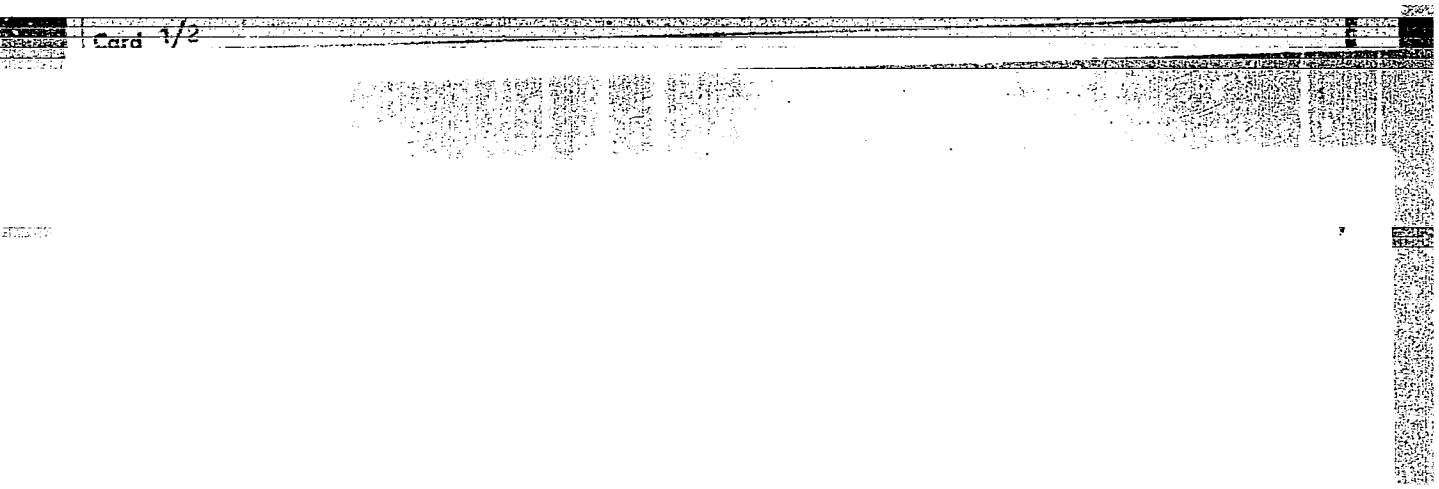

APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000515920003-6"

ACC NR: AP6006705 SOURCE CODE: UR/0292/64/000/010/0015/0016

AUTHOR: Golubkov, G. Ye. (Candidate of technical sciences); Kolganova, V. A. (Engineer)

ORG: none

TITLE: Electric properties of mica and mica-base materials at high temperatures

SOURCE: Elektrotekhnika, no. 10, 1964, 15-16

TOPIC TAGS: mica, mica product, electric property, high temperature effect, resistivity, dielectric constant

ABSTRACT: The results are reported of an experimental investigation of the volume resistivity, loss angle, dielectric constant, and electric strength of mica, micanite, "micaplast" (phlogopite and inorganic bond), mica mat, and mica-glass cloth (mica mat, glass cloth, silicone bond); 50 x 50-mm, 0.1--0.2-mm thick specimens were tested at temperatures up to 500C. These findings are reported: (1) The volume resistivity of mica products at high temperatures is determined by mica; the resistivity of mica-glass cloth at 100--500C is by one order of magnitude higher than that of other materials; (2) The mica-mat $tg\delta$ and ε at high temperatures are lower than those of other materials; (3) Thermal treatment of mica products improves the initial insulating properties of the above materials; at 500C the characteristics of treated and untreated materials are practically equal. Orig. art. has: 7 figures.

SUB CODE: 09 / SUBM DATE: none / ORIG REF: 003 / OTH REF: 001

UDC: 621.315.613.1.001.4

Card 1/1

L 28500-66 EWT(m)/EWP(e) WH/WW

ACC NR: AP6007341 SOURCE CODE: UR/0292/66/000/002/0045/0047

AUTHOR: Golubkov, G. Ye. (Candidate of technical sciences); Kalganova, V. A. (Engineer)

52
B

ORG: none

TITLE: Mica and mica-base materials at high temperatures

SOURCE: Elektrotekhnika, no. 2, 1966, 45-47

TOPIC TAGS: mica, mica product, high temperature material, thermal stress

ABSTRACT: Experimental values of the electric strength of mica and mica products are compared with the values obtained from calculations based on the elementary theory of thermal breakdown. Commercial 0.08—0.1-mm thick specimens of mica, micanite, mica mat, mica-glass cloth, and micaplast were tested for breakdown at 50 cps. It was found that, up to 300C, the breakdown voltage of all above materials practically does not depend on temperature; beyond 300C, the breakdown voltage falls off rapidly. Experimental and theoretical curves $\lg U_{br} = f(1/T)$ are presented which show that, within a 500—600C temperature range, a purely thermal breakdown takes place. Orig. art. has: 4 figures and 1 formula.

SUB CODE: 09, 11 / SUBM DATE: none / ORIG REF: 003

Card 1/1 CC

UDC: 621.317.333.6

ACC NR: AT6025396 (A) SOURCE CODE: UR/0062/66/000/007/1145/1154

AUTHOR: Petrashko, A. I.; Yelinek, V. I.; Andrianov, K. A.; Zhdanov, A. A.; Gashnikova, N. N.; Golubkov, G. Ya.; Litvinova, L. F.

ORG: All-Union Electrical Engineering Institute im. V. I. Lenin (Vsesoyuznyy elektrotekhnicheskiy institut); Institute of Organometallic Compounds, Academy of Sciences, SSSR (Institut elementoorganicheskikh soyedineniy Akademii nauk SSSR)

TITLE: Study of the conversions of polyorganosiloxanes in the course of thermal polycondensation and catalytic polymerization

SOURCE: AN SSSR. Izv. Ser khim, no. 7, 1966, 1145-1154

TOPIC TAGS: catalytic polymerization, polycondensation, siloxane

ABSTRACT: Changes in certain properties of polyorganosiloxanes were followed during their synthesis from organosiloxane oligomers of various compositions. IR spectroscopic analysis confirmed the structural differences in the oligomers obtained by double decomposition and hydrolytic polycondensation. In the process of thermal and catalytic conversions, these differences disappear, and the polymers have a similar structure independently of the method by which the original oligomers were prepared. It is postulated that thermal polycondensation involves the formation of oxygen bridges between the molecular chains as a result of condensation of hydroxyl groups, and hydrocarbon bridges as a result of oxidation of methyl groups of neighboring molecular chains; the

 UDC: 546.287+542.97+542.952+543.422